

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## A2 CC 1: Some Review for Exam2 Quarter 2

This review sheet is not comprehensive. Please look over your old exams, homework assignments, and notes to prepare fully spending time specifically on questions that you struggled with on those assessments. **PLEASE DO ALL WORK ON SEPARATE LINED PAPER. Due: Tuesday, December 19<sup>th</sup>**

For Questions #1-5 perform the indicated operation(s) and express your answer in simplest form

1.  $\frac{h-20}{h^2-16} + \frac{2}{h-4}$

4.  $\frac{4}{x^2+4x-5} - \frac{3}{x^2-1}$

2.  $\frac{2}{x-3} + \frac{4}{3-x}$

5.  $\frac{a-2b}{a^2b} - \frac{a+b}{ab^2}$

3.  $\frac{3}{x^2-16} + \frac{2}{x^2-4x}$

For Questions #6-7 write the given expression as a single rational expression

6.  $\frac{a^{-1}-b^{-1}}{b^{-2}-a^{-2}}$

7.  $\frac{1-\frac{1}{x}}{x-2+\frac{1}{x}}$

For Questions #8-12 solve for all values of  $x$

8.  $\frac{1}{2a} - \frac{9}{a^2+6a} = \frac{2-a}{2a+12}$

9.  $\frac{2x+3}{6} - \frac{2x+3}{3} = \frac{1}{2}$

10.  $\frac{1}{x+3} - \frac{2}{3-x} = \frac{4}{x^2-9}$

11.  $2x^2 = 13x - 15$  (express your answer in simplest form)

12.  $x^2 - 6x = -21$  (express your answer in simplest  $a+bi$  form)

13. Solve by **completing the square:**  $2x^2 + 12x + 6 = 0$

**14.** Solve using the **Quadratic Formula:**  $2x^2 = 7x - 4$

**Questions #15-17 Multiple Choice**

**15.** The roots of the equation  $2x^2 + 3x + 2 = 0$  are

- a. Rational and Equal
- b. Imaginary
- c. Rational and Unequal
- d. Irrational and Unequal

**16.** The roots of the equation  $3x^2 - 12 = 0$  are

- a. Real and Irrational
- b. Real, Rational, and Equal
- c. Imaginary
- d. Real, Rational, and Unequal

**17.** A solution of the equation  $2y^2 + 3y = -2$  is

- a.  $-\frac{3}{4} + \frac{7}{4}i$
- b.  $-\frac{3}{4} + \frac{i\sqrt{7}}{4}$
- c.  $\frac{1}{2}$
- d.  $-\frac{3}{4} + \frac{\sqrt{7}}{4}$